



2011

OFFICE OF PUBLIC HEALTH PREPAREDNESS

SOUTH CAROLINA DEPARTMENT OF HEALTH AND ENVIRONMENTAL CONTROL



TABLE OF CONTENTS

COMMISSIONER'S LETTER	4
Mission and Goals: Public Health Preparedness	
PANDEMIC RESPONSE	5
Response to Pandemic Influenza H1N1	
Hospital Partnership During H1N1	
PUBLIC HEALTH LABORATORY	8
SPOTLIGHT: White Powder Investigations	
DISEASE SURVEILLANCE	9
Systems for Disease Outbreak Response	
South Carolina Aberration Alerting Network - SCAAN	
SPOTLIGHT: Fire at Agrium Fertilizer Plant in Hartsville, SC	
PLANNING & RESPONSE	11
Case Study of a Public Health Outbreak Response	
Mass Fatality Management	
Mass Casualty Plans	
COMMUNICATIONS	13
DHEC's Emergency Management Responsibility	
Media Relations	
SPOTLIGHT: Earthquake Preparedness	
Health Alert Network	
Radio Communications	
VOLUNTEERS & TRAINING	15
Medical Reserve Corps	
Training	
SPOTLIGHT: Repatriation of Americans after the Haiti Earthquake	
WORKING TOGETHER	16
Agroterrorism Prevention: Ag Watch Program	
Region IV Southeastern States Unified Planning Coalition	
BUDGET INFORMATION	18
State budget and match issues, base funding for program	

COMMISSIONER'S LETTER



No one can predict when disaster will strike or the form that disaster will take. In 2010, we saw the impact of a major earthquake in Haiti followed by a severe public health crisis in the form of a cholera epidemic. Closer to home,

we experienced the disastrous oil spill in the Gulf of Mexico that posed unique threats to the environment, the economy and human health. In 2009, we responded to the first influenza pandemic since 1968 with all our disease surveillance, laboratory and emergency management resources, followed by a major public information and vaccination campaign. Each of us has been impacted by the economic recession that has dragged on since 2008, with disastrous consequences for the unemployed and severe impacts on state and local government budgets.

As the state's public health and environmental agency, DHEC provides a wide range of services for the public and the regulated community. The people who work to promote and protect health every day are the same ones who will be called upon to respond to a disaster in South Carolina. That is why the severe state budget cuts that have reduced state funding for DHEC from \$147 million in 2008 to \$82 million in 2011 threaten our preparedness to respond to a disaster. We have seen the public health and environmental workforce drop to

3,646 filled full-time positions, fewer than in 1992. This is a 30% reduction in the workforce since its peak in 1997. The budget reductions experienced by other public agencies also impact on our state's readiness: we have seen significant reductions in funding for emergency management, public safety, education, mental health, social services and natural resource agencies that all play essential roles in disaster response.

The people who work to promote and protect health every day are the same ones who will be called upon to respond to a disaster in South Carolina.

While we have made much progress in public health preparedness for all hazards, as described in this report, it is increasingly difficult to sustain that progress. Preparedness capabilities are threatened by reductions in the base federal funding for the preparedness programs as well as the impact of state budget cuts to core public health programs. As always, we will do the best we can with what we have. We must hope that will be enough if a major disaster strikes. ■

C. Earl Hunter

MISSION AND GOALS

The mission of the Department of Health and Environmental Control is to promote and protect the health of the public and the environment. All areas of the Department play a part in emergency preparedness and response. The public health preparedness program relies on effective partnerships within DHEC, with other government agencies and with private organizations. A State Advisory Committee was established in 2002 to guide public health preparedness efforts. The major goals of the preparedness program are to maintain up-to-date emergency plans; to sustain state and regional disease control and laboratory capabilities; and to coordinate emergency response efforts with hospitals, health care providers, state agencies and other organizations. ■

PUBLIC HEALTH PREPAREDNESS

PANDEMIC RESPONSE

Response to Pandemic Influenza H1N1

On Saturday, April 25, 2009, the DHEC Region 3 epidemiology nurse on call received a call from a clinician at Lexington Medical Center Urgent Care in Chapin and started an investigation of a cluster of influenza-like-illness among a group of sixteen high school students and three adults that had recently returned from a spring break trip to Mexico. Of these individuals, 14 experienced fever and respiratory symptoms. These were the first cases of novel H1N1 (2009) influenza identified in South Carolina.

Over the days and weeks that followed, DHEC conducted full-scale disease investigation and control efforts to find cases of the new flu, treat those who were ill, and give preventive antiviral prophylaxis to people who had been exposed. Outbreak response teams were mobilized across the state. Voluntary isolation of cases and voluntary quarantine of contacts were implemented, as at that time the severity of the disease was not known. Supplies of antiviral medicine were sent from the state Emergency Pharmaceutical Stockpile to each of the eight public health regions for use in treating the ill and controlling the spread of the disease. A large shipment of antiviral medicines and infection control supplies was received from the Strategic National Stockpile for emergency use as needed. Frequent media briefings were held to inform the public about H1N1 (2009) influenza and what they could do to protect themselves from the flu. A state-wide call center was activated and DHEC web pages were updated to provide the latest information to the public. Disease surveillance and reporting were stepped up to identify suspect cases early. Extensive laboratory testing was done on many suspected cases. Health Alert messages were sent to doctors, hospitals and health care providers to keep them up-to-date on the latest guidance from CDC and DHEC. Conference calls were held with hospitals, state and county emergency managers and government agency leaders.

DHEC worked closely with many partners to respond to specific situations and address issues such as school closure, visitation at correctional facilities, and quarantine measures. Frequent contact was maintained with CDC and national organizations like the Association of State and Territorial Health Officials to report on the situation in South Carolina and to keep current with guidance and the national situation. By mid-May the public health response to the initial outbreak shifted away from the disease containment strategy of attempting to stop the spread of H1N1 (2009) by



Health Services emergency operations center coordinated the initial response to the first cases of novel H1N1 (2009) influenza in April 2009.

identifying cases and contacts. At this time, CDC stated that the epidemic was out of containment nationwide and spreading widely throughout many communities. DHEC continued epidemiological investigation and laboratory testing of clusters of H1N1 (2009) cases, hospitalized cases, and deaths. On June 11, 2009, after the disease had spread to 74 countries with over 30,000 cases reported, the World Health Organization declared a pandemic. After that, the disease spread widely around the world.

Over the summer months, the novel H1N1 (2009) influenza virus continued to circulate at low levels in South Carolina. The second wave of the H1N1 (2009) infection began to spread rapidly as schools and colleges

resumed classes in August 2009. Widespread H1N1 (2009) influenza in all parts of the state was reported throughout September. By October 2009, the second wave of the epidemic was reaching levels of illness that are normally seen at the height of flu season, typically in February or March when the disease is widespread across the country. As of November 2010, H1N1 influenza was identified in 1,091 hospitalizations and 49 laboratory confirmed deaths.

The public health priority was to prevent the spread of the disease through vaccination and public information. Initially, vaccination was targeted to the groups who were at greatest risk from the disease, using the very limited quantities of vaccine that were available. In South Carolina, major vaccination campaigns were implemented to vaccinate children and other high priority groups as identified by the Centers for Disease Control. The target groups included: pregnant women, health care workers, children and young adults 6 months to 24 years, and persons aged 25 to 64 who had health conditions associated with higher risk of medical complications from influenza. All H1N1 vaccine supplies were purchased and distributed by the federal government. By December 2009, the State received sufficient vaccine from the Centers for Disease Control and Prevention to offer vaccination to all persons who wanted to be vaccinated. Public and private sector vaccination efforts continued



According to studies by the Centers for Disease Control, approximately 37.6% of South Carolina children ages 6 months to 17 years were vaccinated during the H1N1 (2009) influenza vaccination campaign.

until March 2010, although demand for the vaccine dropped off sharply after January 2010.

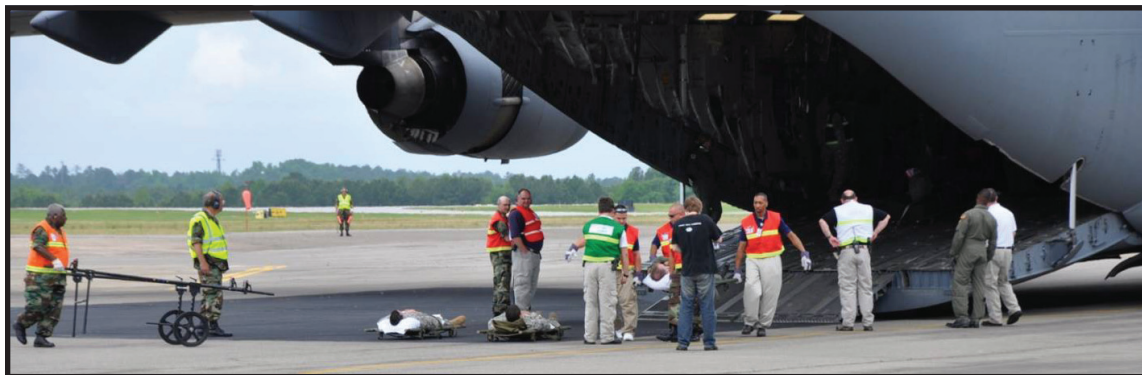
The implementation of H1N1 influenza vaccination clinics in school settings was a major effort. DHEC staff worked closely with school districts and independent schools to keep school personnel as well as students and parents aware of the status of the pandemic. All public school districts and a number of independent schools agreed to partner with DHEC to offer the H1N1 vaccine in schools. The goal was to immunize as many children as possible. Many processes were quickly developed, new partnerships were forged, and existing partnerships were solidified in order to offer school-based vaccination. This effort took coordination and cooperation at many levels. State and Regional DHEC staff worked with local health departments, local public school districts, private schools, contractors for nursing services, and others to offer the H1N1 vaccination to as many school-aged children as possible. A total of 1,332 schools participated with 281,210 doses administered. An estimated 28% of school aged children attending public and private schools received the H1N1 vaccine in a school-located vaccination clinic.



School-based influenza vaccination clinics were very successful in protecting children from the H1N1 (2009) influenza.

A total of 1,668,700 doses of H1N1 vaccine were shipped to South Carolina. Public health departments received 656,100 doses and administered 460,164 vaccinations. Private providers received 1,012,600 doses and reported administering 304,342 vaccinations; however there was significant under-reporting of the number of vaccinations administered. Based on the Centers for Disease Control vaccine coverage estimates and South

Carolina telephone survey information, between 939,616 and 1,049,085 people were vaccinated in South Carolina. The Centers for Disease Control estimated that 37.6% of South Carolina children ages 6 months to 17 years were vaccinated and that 30.9% of persons in the initial target groups were vaccinated. Overall, 20.6% of the state's population ages 6 months and older were vaccinated for H1N1 (2009) influenza. ■



DHEC Regional staff and hospital partners participate in annual National Disaster Medical System exercises with US Army.

HOSPITAL PARTNERSHIP DURING H1N1

The South Carolina Hospital Association joined with DHEC early and aggressively when H1N1 was verified to be in the state in April-May 2009. Initial concerns were to establish an effective and timely communications network with all hospitals in the state so that important information could be disseminated from DHEC to these facilities.

Weekly teleconferences were initiated successfully to address this. Information from DHEC and the SC Hospital Association was pushed out quickly and responses to questions and concerns of the hospitals were provided in a timely manner. The communications network, anchored by the weekly SC Hospital Association-sponsored teleconferences and e-mail network, was most effective. Important challenges raised by hospitals were the difficulty in getting health care workers vaccinated; visitation policies for hospitals, especially regarding children; availability of personal protective equipment, particularly N95 respirators; and the safety issues of

substituting a surgical mask for an N95 respirator.

A statewide H1N1 Influenza Summit was held at the SC Hospital Association in August 2009 which was exceptionally well attended by facilities around the state. The SC Hospital Association initiated a user friendly website that was updated frequently with information provided by national and state agencies to assist facilities responding to this pandemic. Additionally DHEC contracted with the SC Hospital Association to lead the pandemic planning, preparation, and response initiatives with state hospitals. As a result of this contract, the SC Hospital Association hired a Pandemic Influenza Program Coordinator in September 2009. Goals of the project were to increase vaccination rates among health care workers, plan for health care system decompression and alternate triage sites, conduct infection prevention initiatives, assure the availability of personal protection equipment and supplies, and address media concerns. ■

PUBLIC HEALTH LABORATORY

South Carolina's public health laboratory plays an extremely important part in controlling disease and responding to biological or chemical terrorism. The biological lab can test for every germ included on the Centers for Disease Control's high priority list of biological weapons. The public health preparedness program has upgraded the laboratory with new equipment that can test more samples faster. Thanks to the staff hired through the preparedness program, the DHEC laboratory is capable of operating around the clock in emergencies. The value of these investments was shown during the 2009 H1N1 influenza outbreak, when the laboratory tested hundreds of samples to guide public health outbreak control and treatment efforts.

DHEC created a chemical exposures laboratory in 2003. The chemical laboratory is one of only ten in the country certified by the Centers for Disease Control to test for exposure to chemical weapons. DHEC's lab is able to test human samples for toxic industrial chemicals and chemical weapon agents.

DHEC's preparedness team has helped other laboratories in the state plan for public health emergencies. They have led workshops to train hospital lab technicians on sampling and testing for biological and chemical agents. The agency has also placed emergency response kits in

each hospital. These kits include directions and materials for collecting and shipping specimens. ■



SPOTLIGHT

WHITE POWDER INVESTIGATIONS

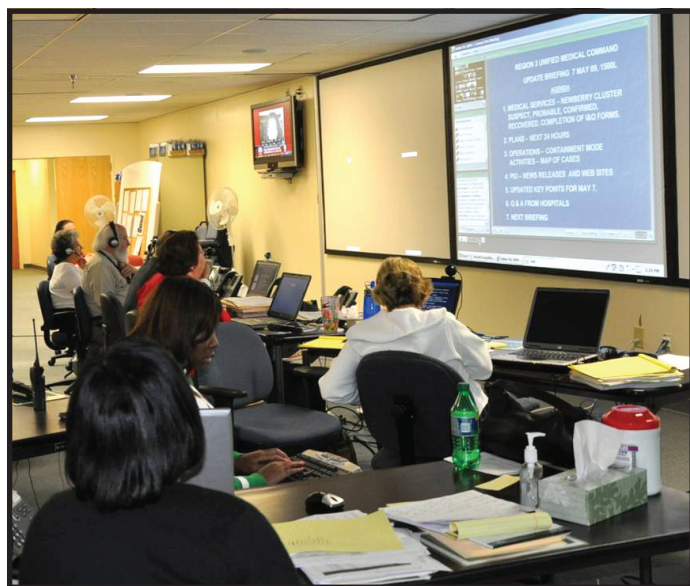
DHEC continues to work closely with law enforcement and other hazard response teams to bring medical response and epidemiological expertise to potential biological terrorism events. Since 2008, DHEC staff have responded to four "white powder" events at the South Carolina State Capitol complex testing these partnerships. The various agencies having responsibility for evidence collection and analyzing the unknown substance work together

well as a unified team. Under this unified approach, samples are shared for criminal and medical analysis and situational information is shared. If laboratory testing is inconclusive or substance confirmation will take additional time, DHEC has developed a process to start medically tracking and interviewing the individuals exposed to the substance. This step could be critical to the continuity of our state government during a bioterrorism attack. ■

DISEASE SURVEILLANCE

Doctors and hospitals are required to report certain diseases to DHEC staff. These diseases are contained on the annual List of Reportable Conditions that is published by the Division of Acute Disease Epidemiology. When these diseases are reported, DHEC staff investigate and take measures to contain the spread of the disease.

Before 2001, regional outbreak response teams were limited to volunteers who had other full time jobs with DHEC. The preparedness program has enabled each region to create at least two full-time staff positions



WebEOC is used in the Regional Public Health Emergency Operation Centers that are staffed by trained Incident Command System personnel.

for disease control. The regions are now better able to respond to outbreaks 24 hours a day, seven days a week.

Outbreak response teams responded to 139 disease outbreaks in 2010, affecting over 4,500 people. The most common disease outbreaks were norovirus or other unknown gastrointestinal illness, pertussis, salmonella, influenza, and varicella. Close working relationships with hospital infection control offices and school nurses help DHEC respond quickly in an outbreak. An annual epidemiology conference brings the state's disease tracking professionals together to review recent outbreaks, learn more about infectious diseases, and improve their skills by working through an epidemiology exercise. ■

Systems for Disease Outbreak Response

DHEC preparedness programs support multiple information systems for rapid disease detection and outbreak response.

- Carolinas Health Electronic Surveillance System allows health care providers to monitor and report diseases electronically.
- STARS – The DHEC Division of Food Protection information system is used to track and analyze all complaints and outbreaks of food-borne illness.
- Epidemiologic Weekly Reports - Regional public health disease tracking reports are collected and shared weekly with all epidemiologists in the state.

SCAAN - S.C. ABERRATION ALERTING NETWORK

SCAAN is a collaborative network of information systems within South Carolina. Currently SCAAN contains the following data sources: hospital emergency department chief-complaint data, Poison Control Center call data, over-the-counter pharmaceutical sales, and CDC's BioSense biosurveillance system.

The hospital emergency department syndromic surveillance system was used to monitor fever-flu

symptoms during the H1N1 influenza epidemic. As of January 1, 2011, a total of 16 hospital facilities were enrolled. Compared to the influenza-like-illness network surveillance system during the H1N1 influenza outbreak, there was a high correlation between the fever-flu and influenza-like-illness percentages. The SCAAN fever-flu data is useful to compare the population of SC residents who visit hospital emergency departments versus a private provider clinic for flu symptoms. ■

- Palmetto Poison Center operates a public “hot line” and reports calls to DHEC.
- South Carolina Information and Intelligence Center – DHEC shares public health information with law enforcement and first responders through a daily bulletin.
- BioSense – This Center for Disease Control system collects reports from Veteran’s Administration hospitals in real time.
- National Retail Data Monitoring System tracks over-the-counter medicine sales at pharmacies.
- Hospital-based Syndromic Surveillance monitors emergency room data on symptoms at participating hospitals.
- State Medical Asset Resource Tracking Tool is used to monitor hospital bed availability and other hospital resources for emergency response.
- Influenza-Like-Illness Network (ILINet) collects reports from healthcare providers on the numbers of patients seen who have flu-like illnesses. The data is used to estimate how widespread the flu is across the state. ■

SPOTLIGHT

FIRE AT AGRIUM FERTILIZER PLANT IN HARTSVILLE, SC

On February 14, 2011, DHEC Environmental Quality Control received a call at 7:15 pm about a large fire at the Agrium Fertilizer Plant in Hartsville, SC. Due to the chemicals involved, this fire posed a potential inhalation risk to the population living in the area and a pollution threat to nearby Lake Prestwood. DHEC’s Emergency Response Team of local and central office responders assisted emergency management and fire officials. As a precaution the area around the plant was evacuated and a shelter was opened and received about 60 occupants. DHEC utilized air and water monitoring equipment to keep officials and the public informed about the potential hazards and to determine when it was safe for people to return to their homes.

Carolina Pines Medical Center started to receive patients in the emergency room who had been exposed to the smoke from the fire. The hospital contacted DHEC’s CHEMPACK Program Director about the potential use of CHEMPACK supplies of atropine in case the hospital supply of this chemical antidote was not adequate. They were assured that the supplies were available for their use if necessary. Fortunately, the number of victims needing treatment was small and the CHEMPACK stockpile was not used.

This incident illustrates DHEC’s preparedness and ability to respond at any time to emergencies. DHEC had trained staff, necessary equipment, emergency supplies, appropriate plans and a community who knew how to contact DHEC during non-business hours. The event continued for several days and DHEC staff were there to support the operation the full time. ■



PLANNING & RESPONSE

Case Study of a Public Health Outbreak Response

Responses to infectious disease outbreaks continue to provide an excellent opportunity to exercise capacities of DHEC staff and our community partners. Each outbreak response tests our timeliness in identifying a pathogen, using surveillance to detect additional cases, implementing control measures and communicating with the impacted community. Large or small, these outbreak responses test our capacities should a larger response be required due to an intentional or natural disaster.

One such example is the response to a pertussis (whooping cough) outbreak. Pertussis is a respiratory illness caused by bacteria. The symptoms are very striking, with violent coughing lasting for weeks if untreated. Particularly dangerous to the very young, older adults and those with acute and chronic health conditions, pertussis is also highly transmissible from person-to-person.

In March 2010, a DHEC local health department was notified of a positive pertussis test from an area hospital. Public Health staff began their investigation with calls to the hospital and the patient to determine their health status and determine other factors that may put additional individuals at risk. After the preliminary investigation, it was identified that this individual was a school teacher and a member of her household, who was an intensive care unit nurse in an area hospital, was also ill with symptoms of pertussis. With the potential for additional cases in both school-aged children and their younger siblings and also hospitalized individuals, a larger investigation involving both the hospital and the school was initiated. Staff and the patients in the hospital were evaluated and the nurse was furloughed until she completed recommended treatment and her symptoms ended. Twenty-three hospital staff who may have been exposed to the nurse were provided with antibiotics to protect them from developing symptoms of pertussis. Educational presentations were provided to the hospital staff. The investigation of the school did not identify any new cases of pertussis, however several groups of children (and their younger siblings) were recommended to begin antibiotic treatment as a protective measure,



Region 5 epidemiology staff coordinate a pertussis outbreak response in April 2010.

due to their possible exposure. A total of eighteen children, parents and teachers completed their treatment.

This example shows how pertussis outbreaks provide an excellent exercise that mimics a response required to a SARS-like virus, pandemic influenza or other highly contagious infectious disease scenario. Our public health investigation activities and partnerships with the community are practiced and refined with every response to pertussis and other airborne, foodborne, and waterborne outbreaks. ■

Mass Fatality Management

An important, but rarely discussed, component of effective response to a mass casualty event is mass fatality management. DHEC has partnered with the SC Coroners Association to improve the state's response to a mass fatality event. In South Carolina, morgue space is at a premium. Some county coroners in the state do not have morgue space or rely on their local hospitals for morgue space, which is limited. Using federal grant funding through the Hospital Preparedness Grant, the SC Coroners Association and several DHEC Public Health Regions have equipped the state with portable morgue trailers, mass fatality response supply trailers and other equipment to improve response. Just as importantly, a state Mass Fatality Planning Team, established and coordinated by DHEC, has developed a State Mass

Fatality Plan to ensure a coordinated response by DHEC and its support agencies. Federal grant funds have also provided mass fatality training for county coroners and other support agencies. A mass fatality plan template for county coroners has been developed by DHEC and training has been provided for the development of a written mass fatality plan. Some DHEC regions have worked with their local partners to develop regional mass fatality plans. In a state where 30 of the 46 county coroner positions are considered part-time, a well-planned, well-supported mass fatality response system will be key to an effective response. ■

Mass Casualty Plans

DHEC has partnered with the SC Emergency Management Division, county emergency managers, local law enforcement, emergency medical services, hospitals and other groups to write state and regional Mass Casualty Plans. The plans describe the roles that various state agencies and emergency response organizations will play in a public health crisis. The Mass Casualty Plan is included in the broader State Emergency Operations Plan published by the SC Emergency Management Division.

The Mass Casualty Plan covers many possible emergency situations from all types of hazards. There are specific plans for pandemic influenza events and mass fatality management. The plan also describes how to use the Strategic National Stockpile and CHEMPACK, the federal program that provides each state with nerve gas antidotes. All plans are tested in exercises and are updated regularly to reflect the lessons learned. ■



Decontamination techniques are practiced with life-like mannequins.



A decontamination training exercise was held at the Medical University of South Carolina to demonstrate proficiency in response to a chemical exposure incident.



DHEC Region 7 Environmental Health staff exercise setting up the SCMED 7 Blu-Med Unit.

COMMUNICATIONS

DHEC's Emergency Management Responsibility

Under the State Emergency Operations Plan, DHEC has leadership responsibility for health and medical services and hazardous material response in a crisis. DHEC also supports other emergency functions in a disaster. DHEC staff at emergency operations centers track the changing situation during a disaster and coordinate response activities.

DHEC is involved in many disaster response tasks. Emergency managers monitor evacuation of medical facilities, coordinate emergency medical services and other resources, and send public health teams from one region to another. Local DHEC staff conduct disease investigations, check the safety of food and water supplies, provide public information, staff special medical needs shelters, respond to hazardous materials threats, and provide public health services.

In 2009, DHEC put in place a WebEOC emergency management information system for the eight public health regions to improve coordination and communication during emergency response. This system was extended to hospitals in 2010 and is fully compatible with the state and county emergency management WebEOC information system. It is very important to be able to share information quickly during a disaster so implementing this system is a major achievement for emergency management. ■

Media Relations

It is extremely important that people get the information they need to stay safe during a disaster. DHEC typically sends a public information officer to the scene of a public health emergency or hazardous materials release in order to meet this need. The agency's Division of Media Relations also assists the staffing of the state's Emergency Support Function 15 External Affairs at the emergency operations center, providing public

SPOTLIGHT

EARTHQUAKE PREPAREDNESS

DHEC Region 7 works closely with all of the hospitals within the Region to address preparedness planning concerns. This regional partnership has expanded in activity and in the number of partner agencies. Major partners in this planning group now include the local mental health systems, the county emergency services agencies, and the county emergency management divisions. In September 2007, the partnership received grant funding to further earthquake preparedness planning and response.

The grant addressed three specific components: the establishment of the Regional Healthcare Coordination Center (Unified Medical Command); development and expansion of the Lowcountry Medical Reserve Corp; and the strategic pre-positioning of medical caches, mobile medical

assets, and other supplies in the 18 Operational Areas identified within our three-county jurisdiction. Each of the 18 medical caches contains a stockpile of basic medical supplies to provide initial medical aid to those who may not otherwise be able to access medical care following a catastrophic earthquake. Each cache has amateur radio equipment that can be used for communication purposes, if other modes of communication are not available.

In addition to the medical caches, nine field hospital tents were purchased. These mobile units can serve as stand-alone units or if necessary, be combined into one large unit. Through the partnership, the Region continues to add the necessary supplies and equipment to further develop the usefulness and versatility of these assets. ■

information support during state emergency responses. The division publishes public information brochures, posters and videos to explain potential situations or problems and how these might affect public health. Media Relations staff also teach emergency response teams - inside and outside the agency - how to give people the facts and guidance they need in a crisis.

A 211 telephone help line service was put in place through a partnership with the state's United Way Association. This system allows people to get public health information during an emergency by dialing 2-1-1 anywhere in the state. The call system is capable of handling thousands of calls in a 24-hour period during a crisis. The system was first used in 2008 during a rabies outbreak and was used throughout the H1N1 influenza pandemic. ■

Health Alert Network

DHEC's Division of Acute Disease Epidemiology used the statewide Health Alert Network to keep health care providers updated throughout the pandemic influenza outbreak. The division used the network to share federal and state guidance with health care workers around the state to reduce the spread of influenza, promote vaccination and improve treatment.

The Health Alert Network reaches over 3,100 health care providers. Health alerts, advisories and updates are issued by phone, e-mail, fax and pager. Mapping capabilities can be used to send messages to a specific area. The Health Alert Network is used frequently whenever there is information about a disease threat or health problem that hospitals and doctors need right away. In 2010, one health alert, 17 health advisories and 12 health updates were sent to health care providers across the state. ■

Radio communications

The public health preparedness program has made it a priority to communicate rapidly and effectively in an emergency. Radios were purchased for DHEC and the 63 hospitals participating in the state's hospital



SCHEART trains amateur radio operators who participate in many public health emergency response exercises, testing established communications resources and redundant systems to ensure inter- and intra-agency coordination.

preparedness program in 2005. The radios will help the agency and the hospitals communicate with each other and with emergency medical services, law enforcement, and firefighters on the Palmetto 800 Network.

In addition, the Hospital Preparedness Program supported a statewide amateur radio network. The University of South Carolina Center for Public Health Preparedness and its partner organizations have built a statewide redundant communications system for hospitals and health care agencies called SCHEART (South Carolina Healthcare Emergency Amateur Radio Team) that increases our state's readiness for everyday emergencies and major disasters by providing hospitals and health care facilities with redundant communications for drills, exercises and real-life emergencies. The Center for Public Health Preparedness works closely with leaders of the Amateur Radio Emergency Services (ARES), Radio Amateur Civil Emergency Services (RACES), and the SC Hospital Association to train and license new operators across the state. Many hospitals and other health care facilities have received equipment and made plans for use of HAM radio operators in an emergency. Statewide coverage was improved by adding radio relays to communications towers across the state. ■

VOLUNTEERS & TRAINING

Medical Reserve Corps

Major emergencies are capable of causing many illnesses, injuries and deaths. The state will need medical volunteers to help meet overwhelming demand for health care in these situations. Each of DHEC's eight public health regions has a Medical Reserve Corps unit. South Carolina was the first state in the nation to establish Medical Reserve Corps that support all counties. There is a coordinator in each region. Volunteers are recruited for specific teams for dispensing medicines, providing medical care, staffing medical needs shelters or other health care duties. A state-wide registry of volunteer health professionals, called SCSERV, was developed. The registry will identify volunteers ahead of time so that in an emergency, they can be quickly sent where they are needed. ■

Training

Preparedness requires knowledgeable and skilled people who are well trained for their roles in emergency management and response. DHEC has worked together with many partners to make training opportunities available. Each year, the preparedness program has supported the Epidemiology Conference, the South Carolina Public Health Association meeting and many conferences and workshops that offer training to health professionals. The training allows emergency response partners to build good working relationships and improves the ability of local communities to respond to public health emergencies. ■

SPOTLIGHT

REPATRIATION OF AMERICANS AFTER THE HAITI EARTHQUAKE

In the weeks following the devastating earthquake in Haiti on January 12, 2010, over 28,000 U.S. citizens were repatriated to the United States by military aircraft. In February 2010, repatriation flights were received at the Charleston International Airport. From February 4-12 there were a total of 22 repatriation flights that landed in Charleston carrying 976 passengers from Haiti.

DHEC's Region 7 public health department supported this repatriation effort by coordinating the Emergency Support Function 8 Health and Medical response. In partnership with federal, state and local agencies, the region conducted a rapid health assessment, staffed and managed a medical triage station, and managed a mental health triage station.

A total of 105 individuals were referred to the Health and Medical Area. Of those, 77 individuals were

seen at the medical triage station and 28 individuals were seen at the mental health station. Of those seen in the medical triage station, 41 individuals were

assessed with no treatment given. The remaining individuals were given over-the-counter medications, advised to take their medicines they had on hand or, if indicated, a prescription was written for the individual. Additionally, six individuals were transported to either an emergency department or to a local physician for more advanced care. ■



DHEC Region 7 health department staff and volunteers assist repatriated citizens in completing a rapid health assessment when arriving in Charleston, South Carolina.

WORKING TOGETHER

Agroterrorism Prevention: Ag Watch Program

Taken together, agriculture and forestry are the largest industry in South Carolina and generate over \$33 billion each year for the state's economy. The public health preparedness program recognized the importance of agriculture and food safety, and set up the Agroterrorism Prevention and Food Safety subcommittee of the State Advisory Committee in 2003 to promote collaborative emergency planning. From the public health perspective, this collaboration was essential to address the threats of avian influenza and other animal diseases that can spread to people, food safety issues and the potential misuse of agricultural chemicals and fertilizers.

Under the leadership of Clemson University's Regulatory Services and Livestock and Poultry Health programs, a statewide biosafety program was developed to address safety and preparedness concerns of farms and food processors. The South Carolina Ag-Watch program was modeled on community watch programs of law enforcement and was funded largely by grants from the Department of Homeland Security. Clemson University

staff led training programs, prepared a manual for food and agricultural facilities, and conducted security audits of farms and processing facilities. The training program has reached hundreds of South Carolina businesses with information on how to improve security; protect livestock, poultry and plants from disease; and respond quickly to suspicious activities. The Ag-Watch Manual, published in 2010, is an excellent resource for agricultural and food processing businesses that seek to improve their emergency preparedness. ■

Region IV Southeastern States Unified Planning Coalition

South Carolina has been an active participant in interstate preparedness and response efforts. The Region IV Unified Planning Coalition (UPC) is a state-led interstate public health and medical preparedness and response organization devoted to planning and the development of partnerships. In March 2006, Alabama, Florida, Georgia, Kentucky, Mississippi, North Carolina, South Carolina, Tennessee and federal representatives joined together to create the Unified Planning Coalition (UPC). The concept was the result of lessons learned from the 2004 and 2005 hurricane seasons when states recognized the need for better regional coordination during disasters. Since that time, preparedness leaders from Region IV states and federal partners have met to address key public health and medical issues and engage in extensive interstate preparedness planning.

Early on, the coalition established a team that could come together during disaster responses to assist in resource identification, gather situational awareness and improve interstate planning efforts for mutual aid through



Statewide Homeland Security Bio-Terrorism: Mass Prophylaxis Planning Preparedness Training and Point Of Dispensing drill was provided in October 2010 by Cities Readiness Initiative Program. One-hundred and five persons were trained and drilled.

the Emergency Management Assistance Compact. The Unified Planning Coalition developed a Resource Coordinating Task Force of public health emergency managers.

The task force was activated for the January 2009 ice storm response in Kentucky. The activation was virtual with all the states participating in daily conference calls, monitoring situation status and supporting Kentucky's planning needs from their daily base of operations in their home states. The Region IV coordinator, housed in the Florida Department of Health, served as the primary point of contact with Kentucky's public health team and relayed their needs to other states for support.

During the eight day activation, the coalition assisted with the deployment of 13 teams through the Emergency Management Assistance Compact. All ESF8 health and medical resources that went into Kentucky through the Emergency Management Assistance Compact were from Region IV and coordinated through the Unified Planning Coalition. Alabama, Mississippi, North Carolina and Tennessee deployed teams to Kentucky.

Planning support is another component of the task force. During the daily conference calls, Kentucky was able to raise issues where the region could assist them in planning. Strategies for conducting assessments, carbon monoxide poisoning messages, and long-term recovery issues were addressed within the task force.

This was the eighth activation of the task force since it was created, but was the first opportunity to test the resource identification component full-scale. Dr. William Hacker, Commissioner of the Kentucky Department for Public Health said "The relationships we have built with our Region IV Unified Planning Coalition partners were essential to our response to the recent ice storm. Thanks to the group, we understood the resources that were available to us from other southeastern states and were able to expedite Emergency Management Assistance Compact requests to meet our needs. The teams that were deployed to Kentucky were invaluable to the local communities and to the state as a whole. I am deeply appreciative of the support provided by the Region IV Unified Planning Coalition and am thankful Kentucky is part of such a valuable group." ■



Strategic National Stockpile Regional Distribution Site Training and Exercise was held in April 2010. This utilized training resources provided by Center for Disease Control and Prevention. US Marshals evaluated and approved the security plan that has been designed for a bio-terrorism, natural disaster, all hazards events.

BUDGET INFORMATION

State budget and match issues, base funding for program

Federal funding has helped DHEC and its many partners build a stronger emergency response system. DHEC began its public health preparedness program in 1999 with federal money from the U.S. Centers for Disease Control and Prevention. In 2002, the CDC expanded that program and the US Department of Health and Human Services began the Hospital Preparedness Program, now under the Assistant Secretary for Preparedness and Response (ASPR). Both of these programs initially focused on bioterrorism. Today, they plan for all types of hazards.

Frequent budget cuts and changes in program guidance and direction in the public health preparedness programs make it very difficult to build and sustain effective public health and hospital response capacity. Reductions in federal funding mean that public health preparedness staffing and initiatives must be

Reductions in federal funding mean that public health preparedness staffing and initiatives must be scaled back.

scaled back. The preparedness programs receive no state funding and must meet the 10% federal match requirements with in-kind match from other state-funded programs or documented effort by hospitals. Given the current economic situation and the threat of further federal and state budget reductions to public health programs, the state will have less ability to detect, prevent, and respond to natural disasters, terrorism or epidemic disease outbreaks. ■

Table 1. Funding History for Public Health and Hospital Preparedness

	CDC Public Health Emergency Preparedness National Funding	CDC Public Health Emergency Preparedness South Carolina Base Funding	ASPR Hospital Preparedness Program National Funding	ASPR Hospital Preparedness Program South Carolina Base Funding
FY 2002-03	\$918,000,000	\$14,497,322	\$125,100,000	\$1,804,277
FY 2003-04	\$870,000,000	\$13,232,255	\$498,000,000	\$7,146,769
FY 2004-05	\$809,956,000	\$12,091,813	\$498,000,000	\$7,146,769
FY 2005-06	\$862,777,000	\$12,108,891	\$470,755,000	\$6,789,755
FY 2006-07	\$699,013,268	\$10,652,835	\$460,216,752	\$6,632,258
FY 2007-08	\$721,736,525	\$9,279,791	\$415,032,000	\$5,978,140
FY 2008-09	\$704,867,418	\$9,455,476	\$398,032,000	\$5,736,768
FY 2009-10	\$688,914,546	\$9,233,414	\$362,017,984	\$5,225,017
FY 2010-11	\$688,259,211	\$9,279,791	\$390,500,000	\$5,629,437



South Carolina Department of Health
and Environmental Control

www.scdhec.gov

*We promote and protect the health of the public
and the environment.*